



Description of *Stopractinca orientalis* n. gen., n. sp. (Dorylaimida : Actinolaimidae) from India

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Summary – *Stopractinca* n. gen. is distinctive in having narrow anterior region of body, cuticle with zig-zag lines and without longitudinal ridges, globular pharyngeal chamber with paired onchia on each arm, comparatively slender odontostyle, tripartite oesophagus and ventromedian supplements arranged in a series. The new genus resembles *Brasilaimus* Lordello & Zamith, 1957; *Stomachoglossa* Andrassy 1968 and *Parastomachoglossa* Coomans & Loof, 1986 but differs from all of them in the absence of longitudinal ridges on cuticle, presence of four additional teeth below onchia and in serial arrangement of ventromedian supplements. The type species, *Stopractinca orientalis* n. gen., n. sp. is described and illustrated.

Résumé – *Description de Stopractinca orientalis* n. gen., n. sp. (Dorylaimida : Actinolaimidae) provenant de l'Inde – *Stopractinca orientalis* n. gen. se distingue par l'étroitesse de la partie antérieure du corps, la cuticule dépourvue de crêtes longitudinales mais comportant une ornementation en zigzags, une chambre pharyngienne globuleuse pourvue d'une paire d'onchia sur chaque branche, un odontostyle mince, un œsophage en trois parties et des suppléments ventro-médians disposés en file régulière. Le nouveau genre ressemble à *Brasilaimus* Lordello & Zamith, 1957; *Stomachoglossa* Andrassy, 1968 et *Parastomachoglossa* Coomans & Loof, 1986; il diffère de ces trois genres par l'absence de crêtes longitudinales sur la cuticule, la présence de quatre dents supplémentaires situées postérieurement aux onchia et la disposition des suppléments ventro-médians. L'espèce type, *Stopractinca orientalis* n. gen., n. sp., est décrite et illustrée.

Key-words : Dorylaimida, Actinolaimidae, *Stopractinca orientalis*.

Soil sample collected from near village Belhanoor, Chikmagalur district, Karnataka state, India yielded an actinolaim nematode representing a new genus designated hereunder as *Stopractinca orientalis* n. gen., n. sp.

The nematodes were killed and fixed in 4 % formaldehyde, dehydrated by slow method and mounted in anhydrous glycerine. Measurements were made using an ocular micrometer.

Stopractinca n. gen.

DIAGNOSIS

Body large-sized, tapering strongly to a narrow lip region. Cuticle thick, marked with zig-zag lines. Lip region set off. Cheilostome forming an arch-like structure with four onchia, four additional teeth present below onchia. Pharyngeal chamber globular, at base of pharyngeal armature with small cuticularized pieces to which guiding ring is attached. Guiding ring "double". Odontostyle dorylaimoid, comparatively slender. Post-extension constriction of oesophagus absent. Oesophagus composed of three sections, a very slender anterior part, an approximately equally long and gradually widening median part, and a long enlarged posterior part. Basal shield of oesophagus present. Female reproductive system amphidelphic. Vulva oval, aduvulval papillae

present. Males with dorylaimoid spicules and lateral guiding pieces. Ventromedian supplements regularly spaced. Female tail long filiform, male tail short bluntly rounded.

TYPE SPECIES

Stopractinca orientalis n. sp.

DIAGNOSIS AND RELATIONSHIP

Stopractinca n. gen. is distinctive in having an attenuated anterior end, cuticle with zig-zag lines and without longitudinal ridges; pharyngeal chamber globular and with paired onchia on each arm, slender odontostyle, tripartite oesophagus and ventromedian supplements in a series.

In its body posture and the presence of a tripartite oesophagus the new genus closely resembles members of the subfamily Brittonematinae, especially *Stomachoglossa* Andrassy, 1968; *Parastomachoglossa* Coomans & Loof, 1986; and *Brasilaimus* Lordello & Zamith, 1957. It, however, differs from all of them in the absence of longitudinal ridges on the cuticle, in the presence of four additional teeth below onchia, a globular pharyngeal chamber and ventromedian supplements in a series. The cuticle is with distinct longitudinal ridges, vestibule with four onchia and supplements in fascicles in the three genera named above.

***Stopractinca orientalis* n. gen., n. sp.**

(Fig. 1)

MEASUREMENTS

Paratype females (n = 4) : L = 2.50-2.95 (2.80) mm; a = 33-38 (36); b = 4.5-4.9 (4.7); c = 12-18 (14); c' = 4.6-6.6 (5.6); V = 46-49 (47); odontostyle = 25-27 (26) μ m; odontophore = 21-22 (22) μ m; oesophagus = 551-611 (590) μ m; prerectum = 180-213 (194) μ m; rectum = 48-60 (52) μ m; tail = 167-228 (205) μ m; ABD = 34-39 (36) μ m.

Paratype males (n = 3) : L = 2.50-2.80 (2.70) mm; a = 35-40 (37); b = 4.2-4.9 (4.6); c = 72-86 (79); c' = 0.8-0.9 (0.87); T = 44-61 (53); odontostyle = 25-26 (26) μ m; odontophore = 22-24 (23) μ m; oesophagus = 574-608 (583) μ m; spicules = 62-65 (64) μ m; lateral guiding pieces = 13-15 (14) μ m; ventromedian supplements = 18-20; prerectum = 225-265 (245) μ m; rectum = 53-66 (60) μ m; tail = 33-36 (34) μ m; ABD = 38-41 (39) μ m.

Holotype (female) : L = 2.7 mm; a = 35; b = 4.6; c = 12; c' = 6.3; V = 48; odontostyle = 27 μ m; odontophore = 22.5 μ m; oesophagus = 589 μ m; prerectum = 188 μ m; rectum = 48 μ m; tail = 228 μ m; ABD = 36 μ m.

DESCRIPTION

Adults : Body straight to slightly ventrally curved upon fixation more prominently in posterior region, especially in males. Anteriorly body tapering to an attenuated lip region, about one-fifth to one-fourth as wide as base of oesophagus. Cuticle marked with zig-zag lines, 2-3 μ m thick at mid-body and 4-6 μ m on tail. Lateral chords occupying about one-fifth of corresponding body width at mid-body. Dorsal and ventral body pores distinct, spaced irregularly; 5-7 dorsal and 9-13 ventral present in oesophageal region. Lip region rounded, offset by slight depression about twice as wide as high. Amphids stirrup-shaped, apertures 9-10 μ m or about half of lip region width. Vestibular ring corrugated. Pharynx armed with four onchia. An additional tooth present below each onchium. Pharyngeal chamber almost globular at base and with two conoid cuticularized pieces in lateral view. Odontostyle 1.4-1.5 lip region widths long, lumen narrow measuring 1.5-2.0 μ m, aperture wide occupying about one third of its length. Guiding ring "double", fixed ring at 16-18 μ m or about one lip region-width from anterior end. Odontophore simple, 0.8-0.9 times odontostyle length. Post-extension constriction of oesophagus absent. Nerve ring at 163-187 μ m from anterior end. Oesophagus tripartite, a slender anterior part, an approximately equally long and gradually widening median part and a long enlarged

posterior part. The second part starts at 105-161 μ m from anterior end of body in vicinity of nerve ring and ends where oesophagus attains its full width. The third part occupies about 48-52 % of total oesophageal length. A small tongue-shaped cuticularized process present between base of oesophageal lumen and cardia. Basal shield of oesophagus present. Cardia elongate conoid, 22-23 μ m long. Oesophageal gland nuclei and their orifices located as follows : DO = 50-52; DN = 52-55; DO - DN = 1.8-2.5; S1N1 = 74-76; S1N2 = 76-79; K = 90-93; S2N = 87-89; S2O = 88-90.

Female : Reproductive system amphidelphic. Vulva longitudinally oval in shape, 2-3 ad vulval papillae present on each side of vulva. Vagina distally sclerotized, 22-27 μ m or about one-third of corresponding body-width deep. Both sexual branches equally developed. Ovaries well developed, 90-112 μ m long with oocytes arranged in a single row except near tip. Demarcation of oviduct and uterus not clearly visible because of dense body granulation in this area. Prerectum 5-6 anal body widths long. Rectum 1.0-1.7 anal body widths long. Tail 4.5-5.6 anal body widths long, gradually tapering to an elongate conoid and pointed tip.

Male : Testes paired, opposed, dorylaimoid; sperm spindle-shaped, 6-8 μ m long. Spicules dorylaimoid, 1.7-1.8 anal body widths long; lateral guiding pieces rod-like, one-fifth to one-fourth of spicular length. Supplements an adanal pair and a series of 18-20 regularly spaced ventromedians. The posterior-most supplement located at 72-77 μ m from cloacal aperture, others 9-12 μ m apart. Prerectum 6-7 anal body-widths long and terminating at level of anterior-most supplement. Cloaca 1.4-1.5 anal body-widths long. Tail short, bluntly rounded, 0.7-0.8 anal body-width long, with three caudal pores on each side.

TYPE HABITAT AND LOCALITY

Soil from around the roots of a forest tree (unidentified) from near Belhanoor village, Chikmagalur district, Karnataka State, India.

TYPE SPECIMENS

Collected in November 1989; holotype female and a paratype male on slide *Stopractinca orientalis* n. sp./1; other paratype males and females on slides *Stopractinca orientalis* n. sp./2-4 deposited in nematode collection of Zoology Department, Aligarh Muslim University, Aligarh. A paratype female and male deposited at Muséum National d'Histoire Naturelle, Paris, France.

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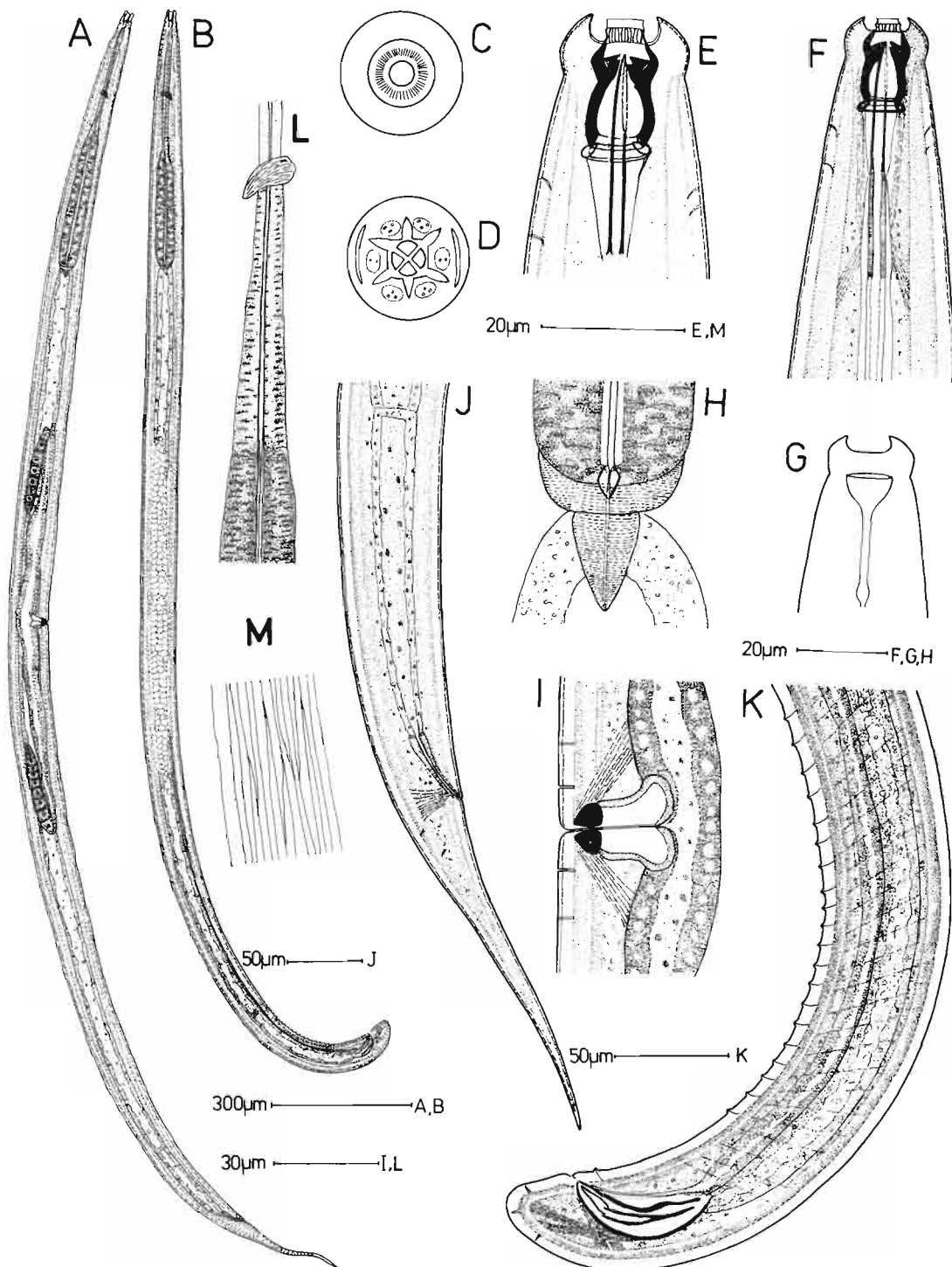


Fig. 1. *Stopractinca orientalis* n. gen., n. sp. A : Entire female; B : Entire male; C : Enface view showing oral aperture and cheilostomal rugae; D : Enface view showing amphids and lips; E, F : Anterior region; G : Anterior end showing amphid; H : Oesophago-intestinal junction; I : Vulval region; J : Female posterior region; K : Male posterior region; L : Middle region of oesophagus; M : Body cuticle showing zig-zag lines.

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